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10/823,076	04/13/2004	Joung-yeal Kim	5649-1229	3985

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EXAMINER	
MERANT, GUERRIER	

ART UNIT	PAPER NUMBER
2117	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/823,076	KIM ET AL.	
	Examiner	Art Unit	
	Guerrier Merant	2117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,10-13,21 and 36-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,10-13,21 and 36-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 March 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's arguments/amendment filed on 03/24/07 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 10, 11, and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitations of comparing the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and outputting y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively, in a test data read step are not supported by the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 10, 11, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1, 10, 11, and 21, the Examiner is not clear what the (nmxx)-bit represents. Furthermore, the Examiner is confused whether the y-bit comparison result data is the y data I/O pads or not.

Claims 2-3, 12,13, 21 & 36-41 inherit the 35 U.S.C. 112, first and second paragraph issues of the independent claims 1, 10, 11, and 21 by virtue of their dependency, and therefore may not be further examined with respect their individual merits.

In view of the 112 rejections, the Examiner maintains prior rejections:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant Admitted Prior Art (herein after AAPA).

Claim 1: **AAPA** discloses a method for testing a semiconductor memory device including nm memory cell arrays for respectively outputting x-bit data when n word lines and m column selecting signal lines are selected wherein n, m, and x are integers greater than 1, the method comprising: extending y-bit data received through y data I/O pads to (nmxx)-bit data to write the x-bit data to the nm memory cell arrays in a test data write step *(e.g. [0011, lines last two sentences])*; and comparing the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and outputting y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively, in a test data read step *(e.g. [0006] & ([0011], lines 18-26)*.

Claim 10: **AAPA** discloses a method for testing a semiconductor memory device including nm memory cell arrays for respectively outputting x-bit data when n word lines and m column selecting signal lines are selected wherein n, m, and x are integers greater than 1, the method comprising: extending y-bit data received through y data I/O pads to (nmxx)-bit data to write the x-bit data to the nm memory cell arrays wherein nm is integer time as greater as y in a test data write step *(e.g. [0011, lines last two sentences])*; and comparing the x-bit data output from the nm memory cell arrays to generate ran-bit comparison result data, grouping and outputting the ran-bit comparison result data into y groups by bit data generated with respect to corresponding n word lines or with respect to corresponding m column selecting signal lines in response to a

control signal, and outputting y-bit comparison result data generated by respectively comparing the y grouped bit data through the y data I/O pads in a test data read step *(e.g. [0006] & ([0011], lines 18-26).*

Claim 11: **AAPA** discloses a semiconductor memory device including nm memory cell arrays configured to respectively outputting x-bit data when n word lines and m column selecting signal lines are selected wherein n, m, and x are integers greater than 1 (*e.g. items 1-8, fig. 1);* a test data write circuit *(e.g. item 18, fig. 1) configured to* extend y-bit data received through y data I/O pads to (nmxx)-bit data to write the x-bit data to the nm memory cell arrays in a test data write step *(e.g. [0011, lines last two sentences])*; and test data read circuit *(e.g. fig. 2)* configured to compare the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and output y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads, respectively *(e.g. [0006] & ([0011], lines 18-26).*

Claim 21: **AAPA** discloses a semiconductor memory device including nm memory cell arrays configured to respectively outputting x-bit data when n word lines and m column selecting signal lines are selected wherein n, m, and x are integers greater than 1 (*e.g. items 1-8, fig. 1);* a test data write circuit *(e.g. item 18, fig. 1) configured to* extend y-bit data received through y data I/O pads to (nmxx)-bit data to write the x-bit data to the nm memory cell arrays in a test data write step *(e.g. [0011, lines last two sentences])*; and

test data read circuit *(e.g. fig. 2)* configured to compare the x-bit data output from the nm memory cell arrays to generate nm-bit comparison result data, and output y-bit comparison result data selected by selecting, by y bits, the nm-bit comparison result data in response to a control signal to the y data I/O pads *(e.g. [0006] & ([0011], lines 18-26)*.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Merant Guerrier whose telephone number is (571) 270-1066. The examiner can normally be reached Monday through Thursday from 10: 30 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques, can be reached on (571) 272-6962. Draft or Informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 270-2066.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia Britt/
Primary Examiner
Art Unit 2117
5/22/07

Guerrier Merant
05/22/07